SECTION I. (AMENDMENTS TO THE CLAIMS)

Please amend the claims as set forth below:

1. **(Cancelled)**
2. **(Cancelled)**
3. **(Cancelled)**
4. **(Cancelled)**
5. **(Cancelled)**
6. **(Cancelled)**
7. **(Cancelled)**

8. **(Previously presented)** A high throughput liquid chromatography system comprising:

a plurality of separation columns containing stationary phase material and adapted to perform a plurality of parallel chromatographic separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation columns, wherein each detection region of the plurality of detection regions includes an internal cavity having a flow axis;

a common radiation source for emitting radiation, wherein at least a portion of the radiation is transmitted into each detection region of the plurality of detection regions substantially coaxially with the flow axis of each detection region of the plurality of detection regions;

a wavelength selection element disposed between the common radiation source and the plurality of detection regions;

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions; and

a plurality of fiber optic conduits disposed between the wavelength selection element and the plurality of detection regions for transmitting radiation emitted from the radiation source to the plurality of detection regions, wherein each fiber optic conduit of the plurality of fiber optic conduits has a first end that bounds a portion of the cavity of a different flow-through detection region of the plurality of detection regions.

9. **(Previously presented)** The system of claim 8, further comprising a plurality of flow cells, wherein each detection region of the plurality of detection regions is disposed within a different flow cell of the plurality of flow cells.

10. **(Original)** The system of claim 9, further comprising a plurality of capillary conduits disposed between, and in fluid communication with, the plurality of separation columns and the plurality of flow cells.

11. **(Previously presented)** The system of claim 8 wherein:

each detection region of the plurality of detection regions includes a fluid flow channel along the flow axis;

each fluid flow channel has a length and a width; and

the length is greater than the width.

12. **(Previously presented)** The system of claim 8 wherein each detection region of the plurality of detection regions includes a fluid flow channel along the flow axis, and each fluid flow channel has a length of at least about two millimeters.

13. **(Previously presented)** The system of claim 8 wherein the radiation source comprises a broadband emission UV source.

14. **(Original)** The system of claim 13 wherein the broadband emission UV source comprises a deuterium lamp or an arc lamp.

15. **(Canceled)**

16. **(Previously presented)** A high throughput liquid chromatography system comprising:

a plurality of separation columns containing stationary phase material and adapted to perform a plurality of parallel chromatographic separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation columns, wherein each detection region of the plurality of detection regions has a flow axis;

a common radiation source for emitting radiation, wherein at least a portion of the radiation is transmitted into each detection region of the plurality of detection regions substantially coaxially with the flow axis of each detection region of the plurality of detection regions;

a wavelength selection element comprising a plurality of monochromators disposed between the common radiation source and the plurality of detection regions; and

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions.

17. **(Previously presented)** A high throughput liquid chromatography system comprising:

a plurality of separation columns containing stationary phase material and adapted to perform a plurality of parallel chromatographic separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation columns, wherein each detection region of the plurality of detection regions has a flow axis;

a common radiation source for emitting radiation, wherein at least a portion of the radiation is transmitted into each detection region of the plurality of detection regions substantially coaxially with the flow axis of each detection region of the plurality of detection regions;

a wavelength selection element comprising a plurality of wavelength dispersion elements disposed between the common radiation source and the plurality of detection regions; and

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions.

18. **(Previously presented)** A high throughput liquid chromatography system comprising:

a plurality of separation columns containing stationary phase material and adapted to perform a plurality of parallel chromatographic separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation columns, wherein each detection region of the plurality of detection regions has a flow axis;

a common radiation source for emitting radiation, wherein at least a portion of the radiation is transmitted into each detection region of the plurality of detection regions substantially coaxially with the flow axis of each detection region of the plurality of detection regions;

a wavelength selection element disposed between the common radiation source and the plurality of detection regions;

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions; and

a photomask disposed between the wavelength selection element and the multi-channel detector.

19. **(Cancelled)**

20. **(Cancelled)**

21. **(Cancelled)**

22. **(Previously presented)** A high throughput liquid chromatography system comprising:

a plurality of separation columns containing stationary phase material and adapted to perform a plurality of parallel chromatographic separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation columns, wherein each detection region of the plurality of detection regions has a flow axis;

a common radiation source for emitting radiation, wherein at least a portion of the radiation is transmitted into each detection region of the plurality of detection regions substantially coaxially with the flow axis of each detection region of the plurality of detection regions;

a wavelength selection element disposed between the common radiation source and the plurality of detection regions; and

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions, wherein the multi-channel detector includes a reference channel used to correct signals received from at least one other channel of the multi-channel detector.

23. **(Previously presented)** The system of claim 8 wherein the plurality of separation columns includes at least ten separation columns, the plurality of detection regions includes at least ten detection regions, and the multi-channel detector includes at least ten channels.

24. **(Cancelled)**

25. **(Cancelled)**

26. **(Cancelled)**

27. **(Cancelled)**

28. **(Cancelled)**

29. **(Cancelled)**

30. **(Cancelled)**

31. **(Cancelled)**

32. **(Cancelled)**

33. **(Cancelled)**

34. **(Cancelled)**

35. **(Currently amended)** A high throughput liquid chromatography system comprising:

a plurality of separation columns containing stationary phase material and adapted to perform a plurality of parallel chromatographic separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation columns, wherein each detection region of the plurality of detection regions includes an internal cavity having a flow axis;

a common radiation source;

a first plurality of fiber optic conduits optically coupled to the radiation source and ~~lenslessly optically coupled~~ to the plurality of detection regions, wherein each fiber optic conduit of the plurality of first fiber optic conduits ~~being~~ is associated with a different detection region of the plurality of detection regions, has a first end bounding a portion of the cavity of its associated detection region, and ~~transmitting~~ transmits radiation to its associated detection region along the flow axis; and

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions.

36. **(Cancelled)**

37. **(Cancelled)**

38. **(Cancelled)**

39. **(Cancelled)**

40. **(Cancelled)**

41. **(Cancelled)**

42. **(Cancelled)**

43. **(Previously presented)** A high throughput liquid chromatography system comprising:

a plurality of separation columns containing stationary phase material and adapted to perform a plurality of parallel chromatographic separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation columns, each detection region of the plurality of detection regions having a flow axis;

a common radiation source;

a plurality of optical conduits coupled to the radiation source and the plurality of detection regions, each optical conduit of the plurality of optical conduits being associated with a different detection region of the plurality of detection regions and transmitting radiation to its associated detection region along the flow axis;

a wavelength selection element comprising a plurality of wavelength dispersion elements disposed between the common radiation source and the plurality of optical conduits; and

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions.

44. **(Previously presented)** A high throughput liquid chromatography system comprising:

a plurality of separation columns containing stationary phase material and adapted to perform a plurality of parallel chromatographic separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation columns, each detection region of the plurality of detection regions having a flow axis;

a common radiation source;

a plurality of optical conduits coupled to the radiation source and the plurality of detection regions, each optical conduit of the plurality of optical conduits being associated with a different detection region of the plurality of detection regions and transmitting radiation to its associated detection region along the flow axis;

a wavelength selection element comprising a plurality of monochromators disposed between the common radiation source and the plurality of optical conduits; and

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions.

45. **(Previously presented)** A high throughput liquid chromatography system comprising:

a plurality of separation columns containing stationary phase material and adapted to perform a plurality of parallel chromatographic separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation columns, each detection region of the plurality of detection regions having a flow axis;

a common radiation source;

a plurality of optical conduits coupled to the radiation source and the plurality of detection regions, each optical conduit of the plurality of optical conduits being associated with a

different detection region of the plurality of detection regions and transmitting radiation to its associated detection region along the flow axis;

a wavelength selection element disposed between the common radiation source and the plurality of optical conduits;

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions; and

a photomask disposed between the wavelength selection element and the multi-channel detector.

46. **(Cancelled)**

47. **(Cancelled)**

48. **(Cancelled)**

49. **(Previously presented)** A high throughput liquid chromatography system comprising:

a plurality of separation columns containing stationary phase material and adapted to perform a plurality of parallel chromatographic separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation columns, each detection region of the plurality of detection regions having a flow axis;

a common radiation source;

a plurality of optical conduits coupled to the radiation source and the plurality of detection regions, each optical conduit of the plurality of optical conduits being associated with a different detection region of the plurality of detection regions and transmitting radiation to its associated detection region along the flow axis;

a wavelength selection element disposed between the common radiation source and the plurality of optical conduits; and

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions, wherein the multi-channel detector includes a reference channel used to correct signals received from at least one other channel of the multi-channel detector.

50. **(Cancelled)**

51. **(Cancelled)**

52. **(Previously presented)** The system of claim 8 wherein each separation column of the plurality of separation columns is microfluidic.

53. **(Previously presented)** The system of claim 8 wherein the plurality of microfluidic separation columns is integrated into a unitary device.

54. **(Previously presented)** The system of claim 53 wherein the plurality of detection regions is disposed within the unitary device.

55. **(Previously presented)** The system of claim 53 wherein the unitary device comprises a plurality of substantially planar device layers.

56. **(Previously presented)** The system of claim 54 wherein the plurality of substantially planar device layers includes a plurality of stencil layers.

57. **(Previously presented)** The system of claim 54 wherein the plurality of device layers comprises adhesiveless polymer layers that are interpenetrably bound together.

58. **(Previously presented)** The system of claim 57 wherein the polymer comprises a polyolefin.

59. **(Previously presented)** The system of claim 8 wherein the plurality of separation columns includes at least ten separation columns, the plurality of detection regions includes at least ten detection regions, and the multi-channel detector includes at least ten channels

60. **(Previously presented)** The system of claim 52, further comprising:

a common source of pressurized mobile phase; and

a fluidic distribution network in fluid communication with the mobile phase source and with each separation column of the plurality of separation columns.

61. **(Currently amended)** The system of claim 35, further comprising a second plurality of fiber optic conduits ~~lenslessly~~ optically coupled to the plurality of detection regions and the multi-channel detector, wherein each fiber optic conduit of the plurality of second fiber optic conduits ~~being~~ is associated with a different detection region of the plurality of detection regions, has a second end bounding a portion of the cavity of its associated detection region, and ~~being~~ is associated with a different detector channel of the multi-channel detector.

62. **(Currently amended)** A high throughput liquid ~~chromatography~~ analytical separation system comprising:

a plurality of separation ~~columns containing stationary phase material and~~ channels adapted to perform a plurality of parallel ~~chromatographic~~ analytical separations;

a plurality of flow-through detection regions in fluid communication with the plurality of separation ~~columns~~ channels, wherein each detection region of the plurality of detection regions includes an internal cavity;

a common radiation source for emitting radiation, wherein at least a portion of the radiation is transmitted into each detection region of the plurality of detection regions;

a multi-channel detector in sensory communication with each detection region of the plurality of detection regions; and

a first plurality of fiber optic conduits optically coupling the radiation source and the plurality of detection regions, wherein each fiber optic conduit of the first plurality of fiber optic conduits is associated with ~~lenslessly optically coupled to~~ a different detection region of the plurality of detection regions, and has a first end bounding a portion of the cavity of its associated detection region.

63. **(Currently amended)** The system of claim 62, further comprising a second plurality of fiber optic conduits optically coupling the plurality of detection regions and the multi-channel detector, wherein each fiber optic conduit of the second plurality of fiber optic conduits is associated with ~~lenslessly optically coupled to~~ a different detection region of the plurality of detection regions, has a second end bounding a portion of the cavity of its associated detection region, and ~~coupled to~~ is associated with a different channel of the multi-channel detector.

64. **(Currently amended)** The system of claim 62 wherein the plurality of microfluidic separation ~~columns~~ channels is integrated into a unitary device.

65. **(Previously presented)** The system of claim 64 wherein the plurality of detection regions is disposed within the unitary device.